Instructions on How to Use the Indiana Geological Survey website to View the Tie Card Layer.

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information regarding the Tie Card Layer

Instructions:

Open "**Internet Explorer**":

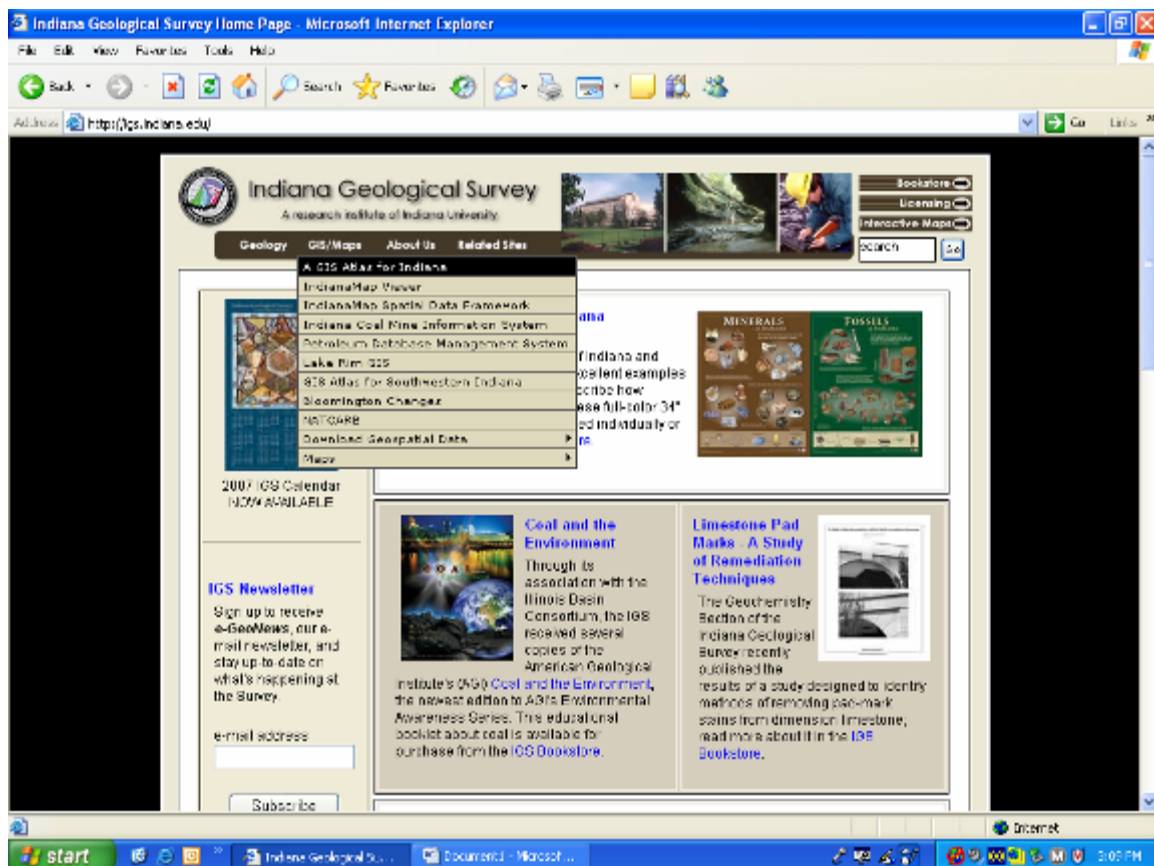Copy the website below into the address bar on Internet Explorer:
> http://igs.indiana.edu/
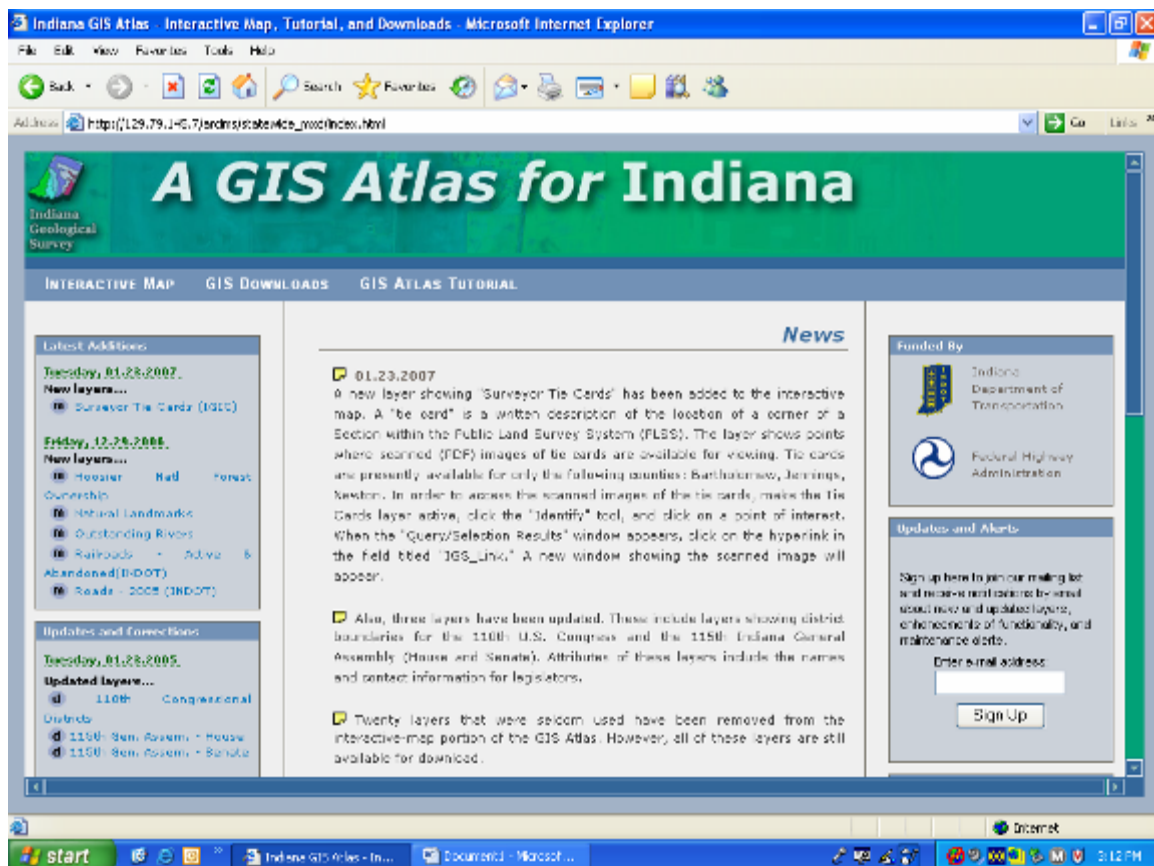
Press the "Enter" key

You will see the screen below:

Use your cursor and hover over the "GIS/Maps" under the "Indiana Geological Survey"
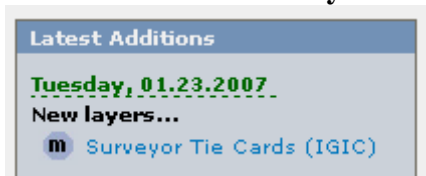name

A drop menu will appear, and then move your cursor to hover over **"A GIS Atlas for
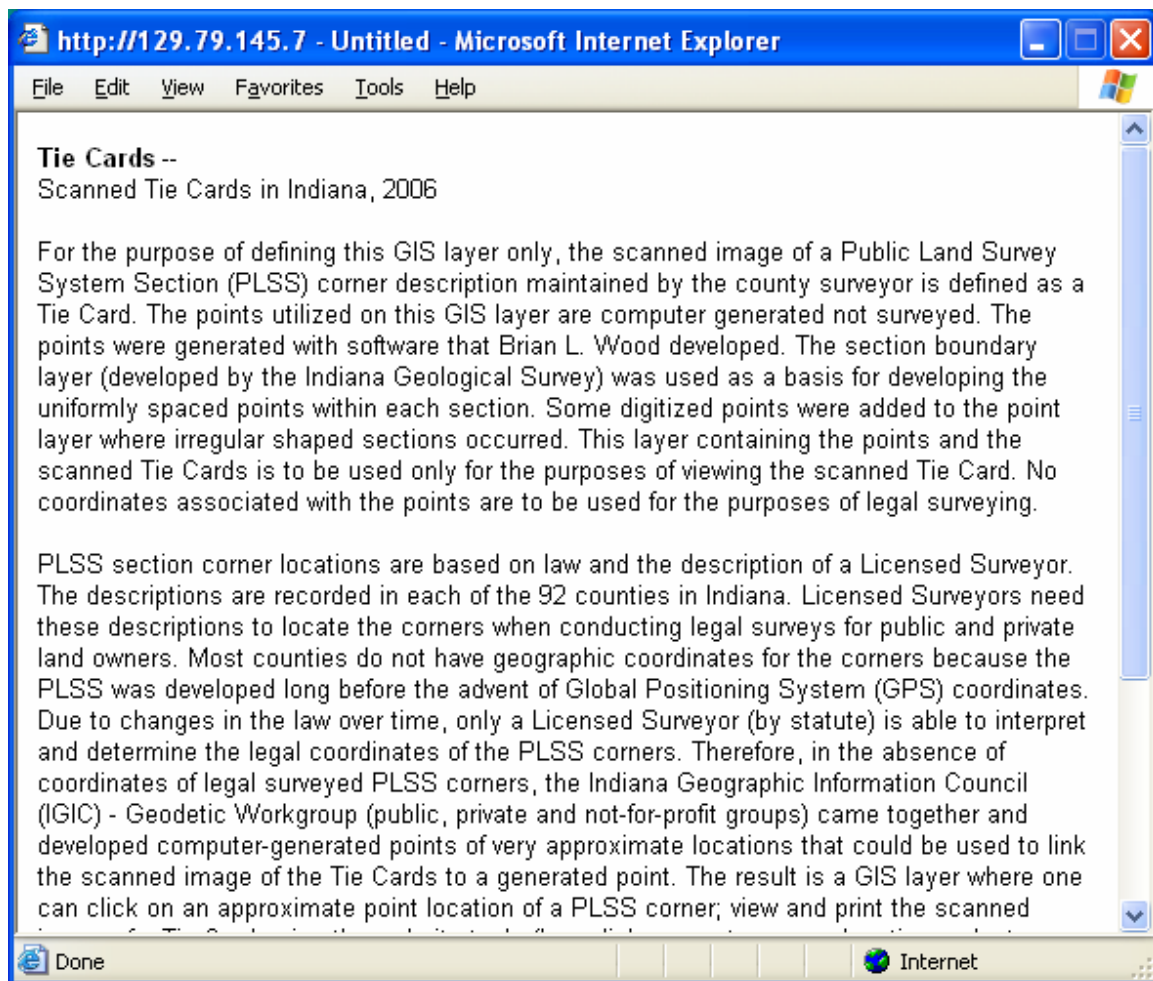Indiana"** and left click on it.

The next screen you see (below) will provide information about new and updated GIS layers on the website. Notice the "Surveyor Tie Card (IGIC)" layer was added 1/23/2007.
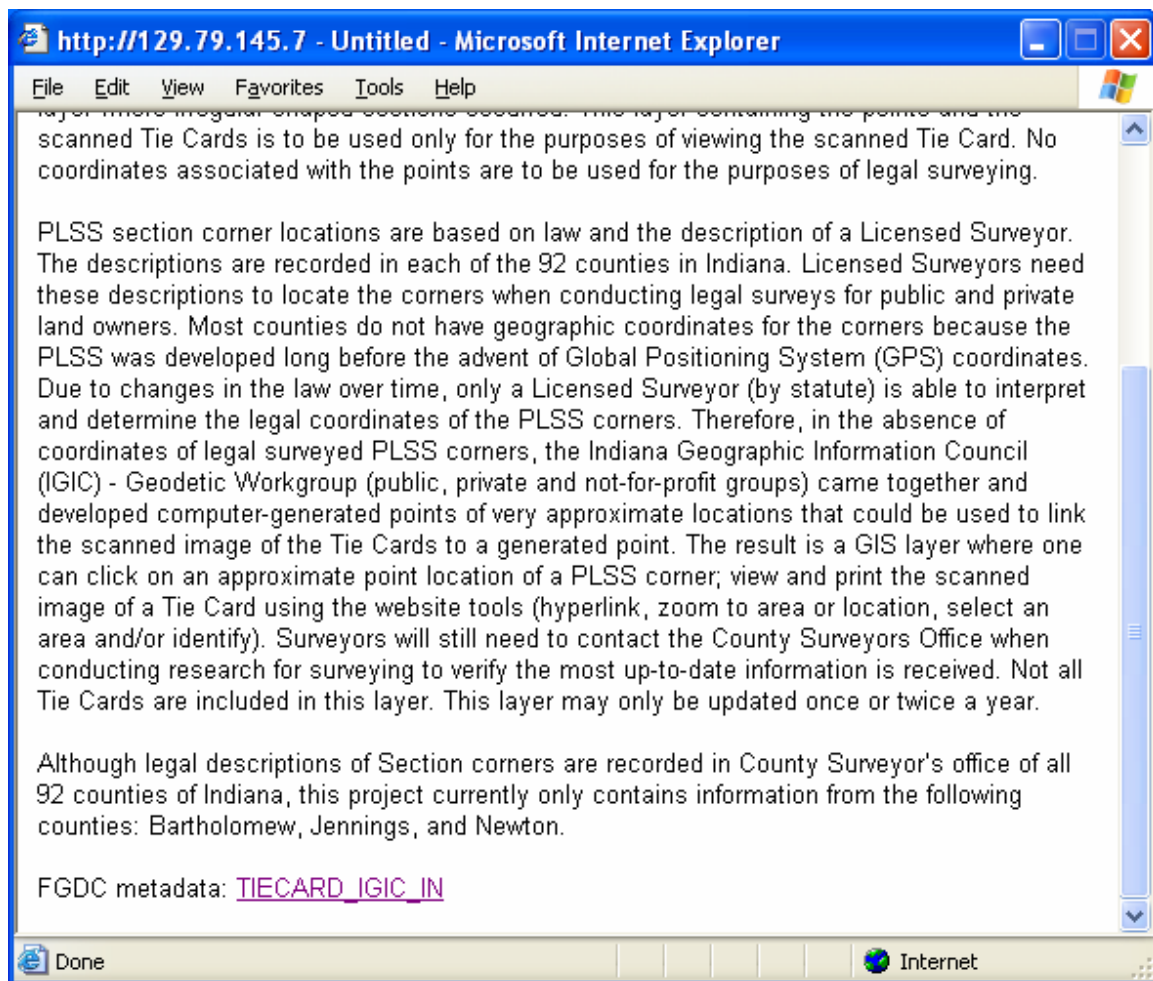
Left click on the "**Surveyor Tie Cards (IGIC)**" to see the Metadata for the layer.

Below you will see a brief Metadata file popup. The Metadata is a document that describes the who, what, when, where and why and describes what the layer is to be used for.
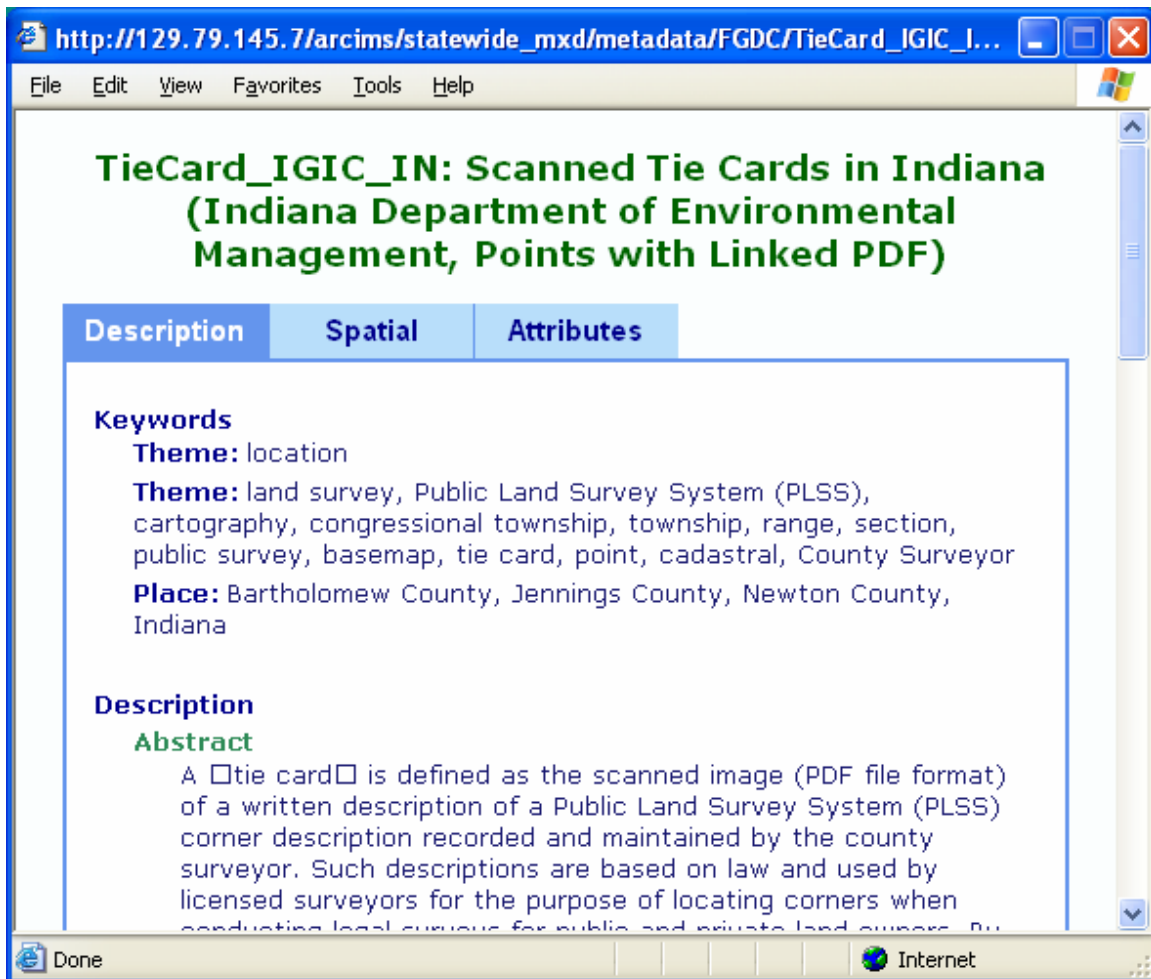
Tie Cards --
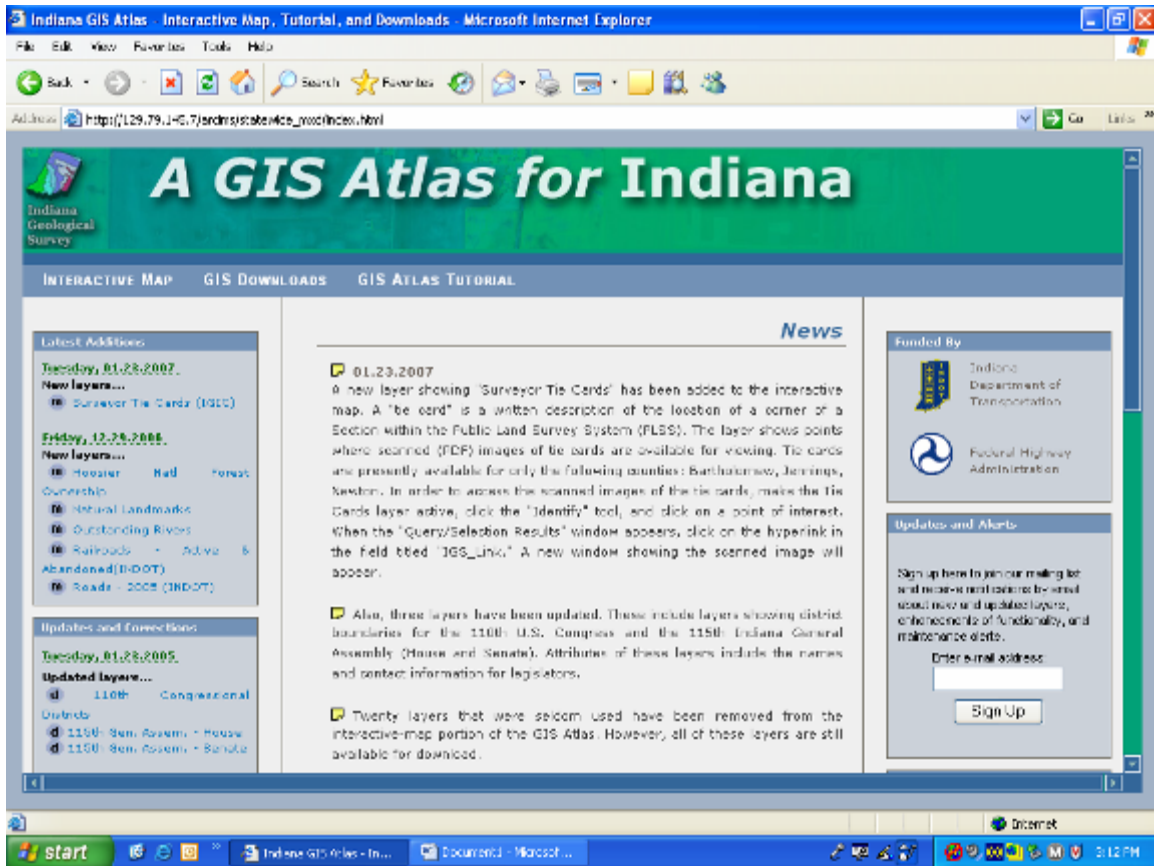Scanned Tie Cards in Indiana, 2006

For the purpose of defining this GIS layer only, the scanned image of a Public Land Survey System Section (PLSS) corner description maintained by the county surveyor is defined as a Tie Card. The points utilized on this GIS layer are computer generated not surveyed. The points were generated with software that Brian L. Wood developed. The section boundary layer (developed by the Indiana Geological Survey) was used as a basis for developing the uniformly spaced points within each section. Some digitized points were added to the point layer where irregular shaped sections occurred. This layer containing the points and the scanned Tie Cards is to be used only for the purposes of viewing the scanned Tie Card. No coordinates associated with the points are to be used for the purposes of legal surveying.

PLSS section corner locations are based on law and the description of a Licensed Surveyor. The descriptions are recorded in each of the 92 counties in Indiana. Licensed Surveyors need these descriptions to locate the corners when conducting legal surveys for public and private land owners. Most counties do not have geographic coordinates for the corners because the PLSS was developed long before the advent of Global Positioning System (GPS) coordinates. Due to changes in the law over time, only a Licensed Surveyor (by statute) is able to interpret and determine the legal coordinates of the PLSS corners. Therefore, in the absence of coordinates of legal surveyed PLSS corners, the Indiana Geographic Information Council (IGIC) - Geodetic Workgroup (public, private and not-for-profit groups) came together and developed computer-generated points of very approximate locations that could be used to link the scanned image of the Tie Cards to a generated point. The result is a GIS layer where one can click on an approximate point location of a PLSS corner; view and print the scanned

Continued on screen below.
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Although legal descriptions of Section corners are recorded in County Surveyor's office of all 92 counties of Indiana, this project currently only contains information from the following counties: Bartholomew, Jennings, and Newton.

FGDC metadata: TIECARD_IGIC_IN

Click on the **"TIECARD_IGIC_IN"**

This will take you to the full Metadata record (below)

7) Close out the Metadata box.or boxes after you have read the information.

Now you are back at the page below

Scroll down the page to where you see the "Use the interactive map!"
Click on the **"Use the Interactive map"** or the **image of the map**

You are directed to http://129.79.145.7/arcims/statewide%5Fmxd/viewer.htm
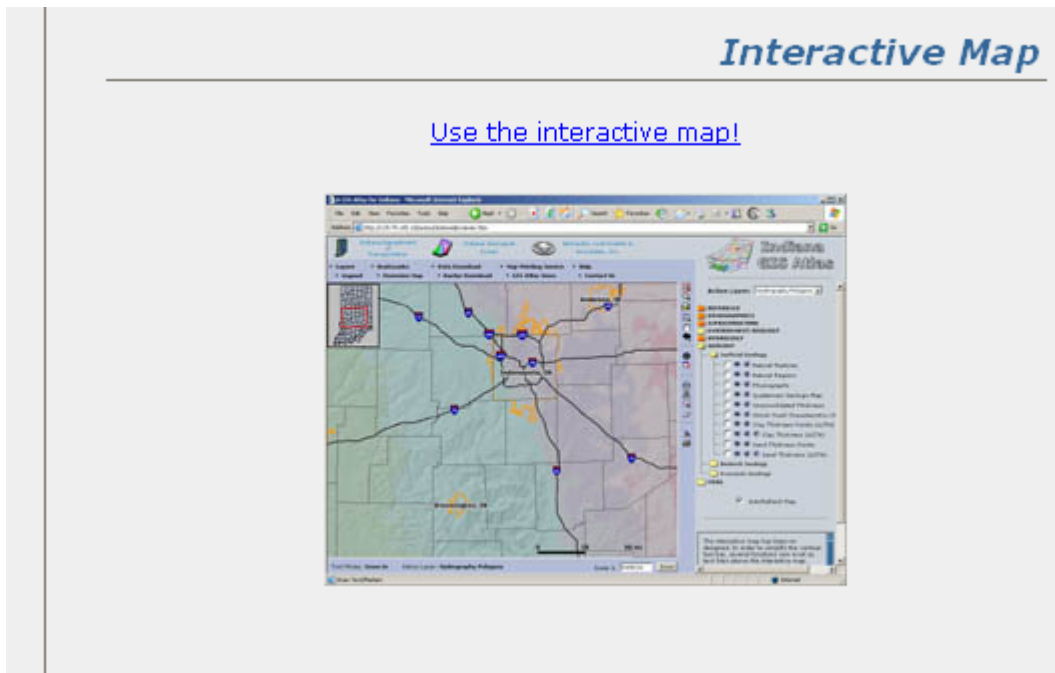
On the right hand side of the screen you will see a list of folders
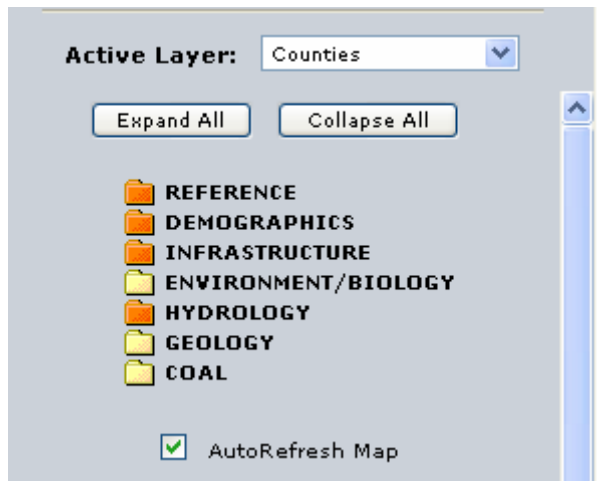
Click on the orange "Reference" folder

You will see two more folders appear under the reference folder

Click on the orange "PLSS & Quad Boundaries" folder

Under the "PLSS & Quad Boundaries" folder a new list of layers appears. Some layers already have a checkmark in front of them, leave them checked.

You are going to click inside the white square in front of several layers:
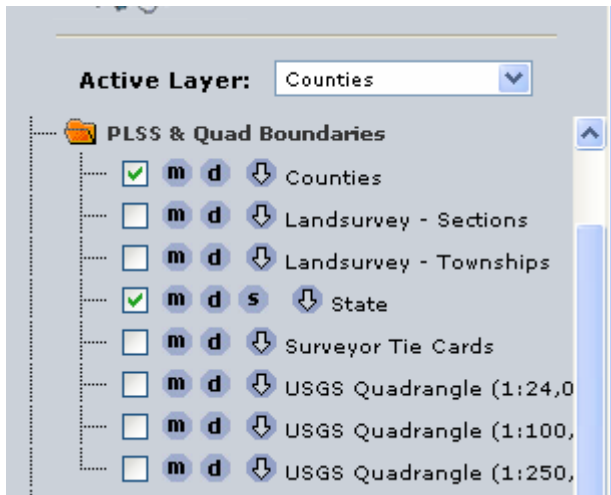
Click on one box in front of each layer specified below (and give it time to Retrieve the map before clicking on the next box.
Click on:

"Landsurvey – Sections"

Click on:

"Landsurvey – Townships"

Click on:
    "Surveyor Tie Cards"

A disclaimer appears. Please read the disclaimer.
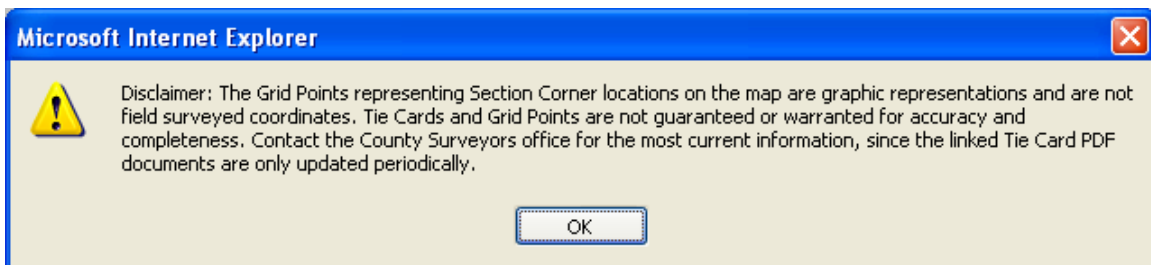
Click okay.

The map should appear as below and the disclaimer is gone.
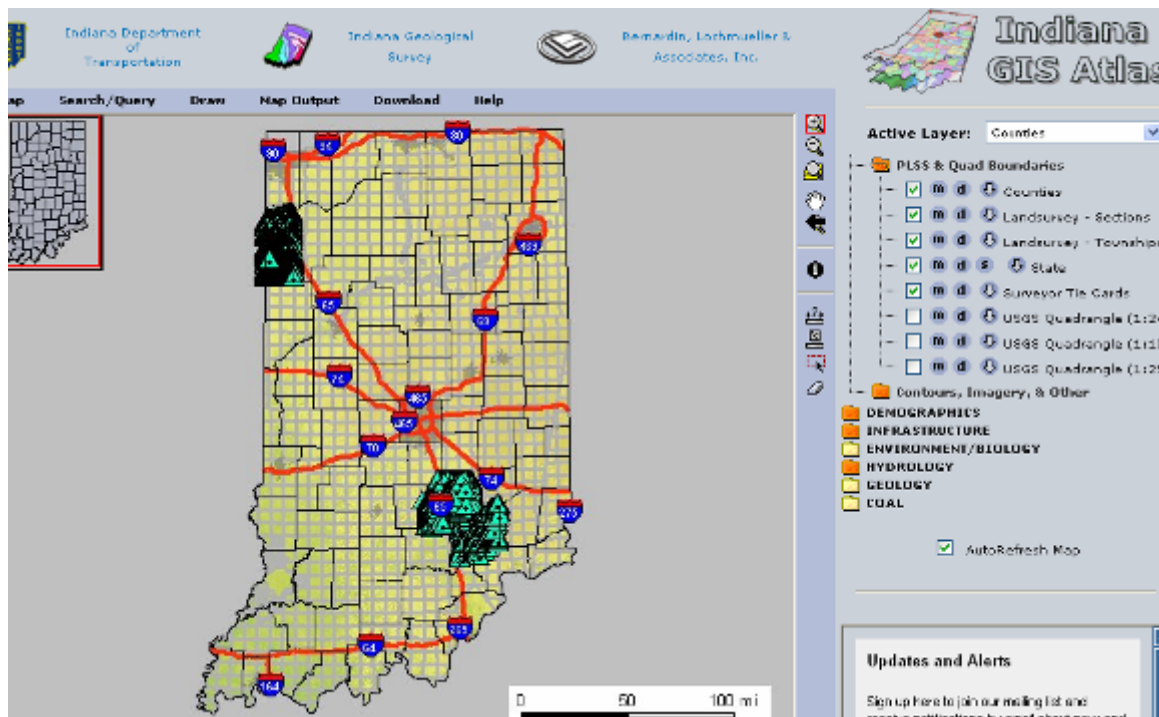
Now you see the three counties that contain Tie Card information (Bartholomew, Newton, and Jennings).

Next you will turn on the 2005 aerial photos.

Click on the box in front of the orange "Contours, Imagery, & Other" folder
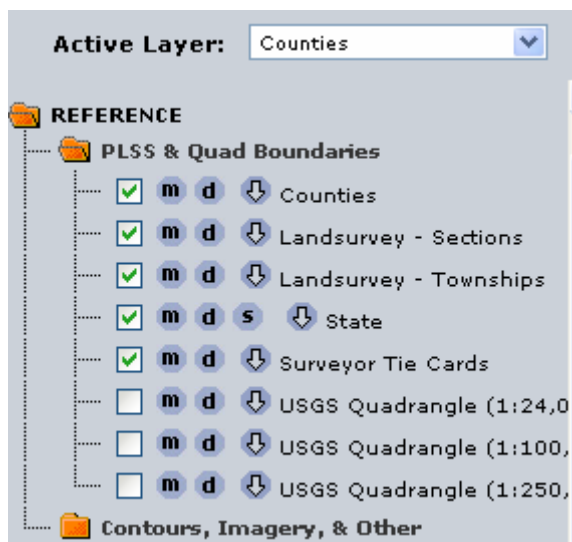
More layers will appear.

Click on the box in front of the "Aerial Photos – 2005"
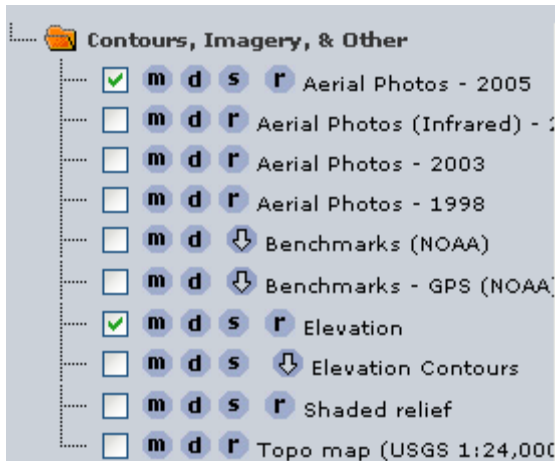
The next step is extremely important. You need to set the "Active Layer" to "Surveyor Tie Cards"

Click the **arrow** by "Counties" and a drop down list of layers appears.

Click on the Surveyor Tie Cards
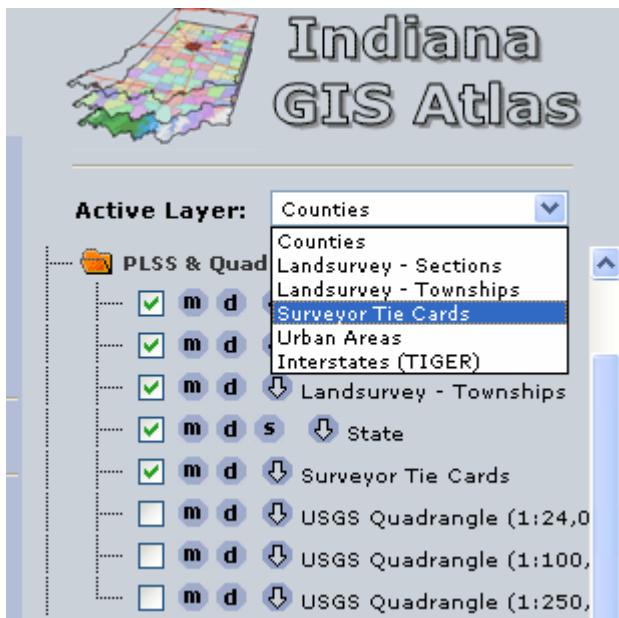
You will now see
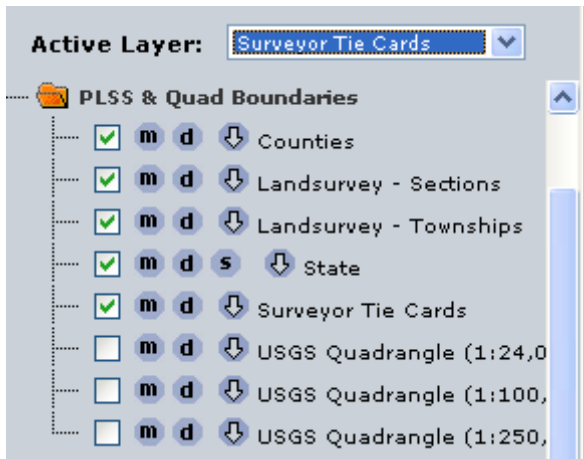
Make sure the "Active Layer" is "Surveyor Tie Cards".

You won't be able to see the links or the Tie Cards unless the "Surveyor Tie Cards" is the "Active Layer".

Now you are ready to zoom to the area of interest.

There are several ways to look at the Tie Cards.

You will use the tool bar on the right side of the map and the Search/Query Function (located on the bar above the map).

Toolbar – Hoover your cursor over the tool to see what each tool does.

Hoover over "Search/Query" and click on "Zoom to Location"

The view is refreshed with the new view on the right side of the map.

Remember there are only three counties that currently have Tie Cards associated with this layer (Bartholomew, Newton, and Jennings).

Go to the "Zoom to County", then [Select County] from the drop down. Click on the county of interest (ex: Bartholomew)
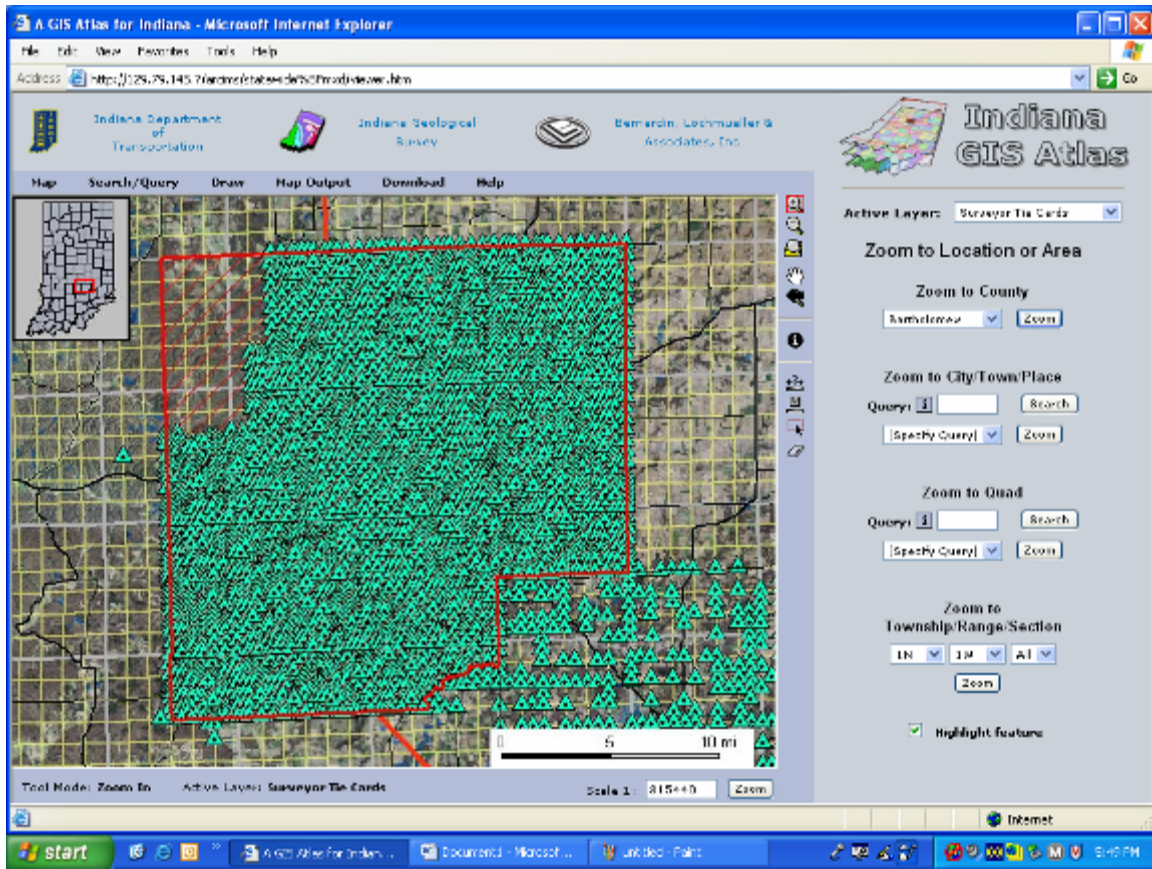
Or if you know the Township and Range, and section you want select from the dropdown menus then hit the "zoom" button
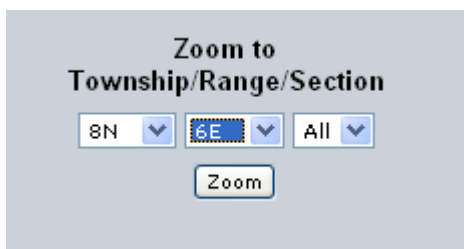
You have zoomed into the Township 8 North, Range 6 East, showing all the sections (the area bounded by the red box. The numbers on the screen reference the Township and Range.
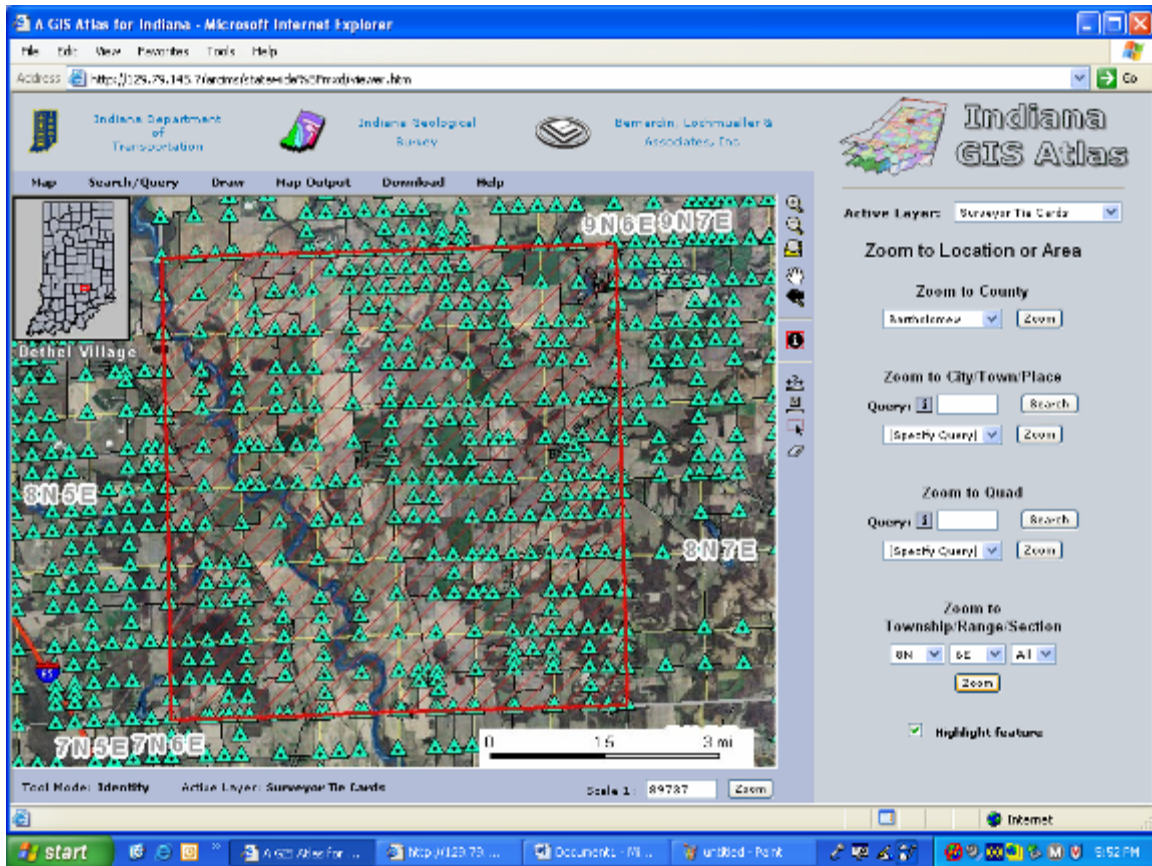
You can use the "Zoom In" button by clicking on it.

Then move to the map, Click on the map (hold the mouse button down) and draw a rectangle around the points you want to zoom in on.

Or

Go back and add a section number to the "Zoom to Township/Range Section" were it says "ALL"

I selected "19" from the dropdown menu. Click on the "Zoom" button.

You are now looking at T8N, R6E, section 19 (below).
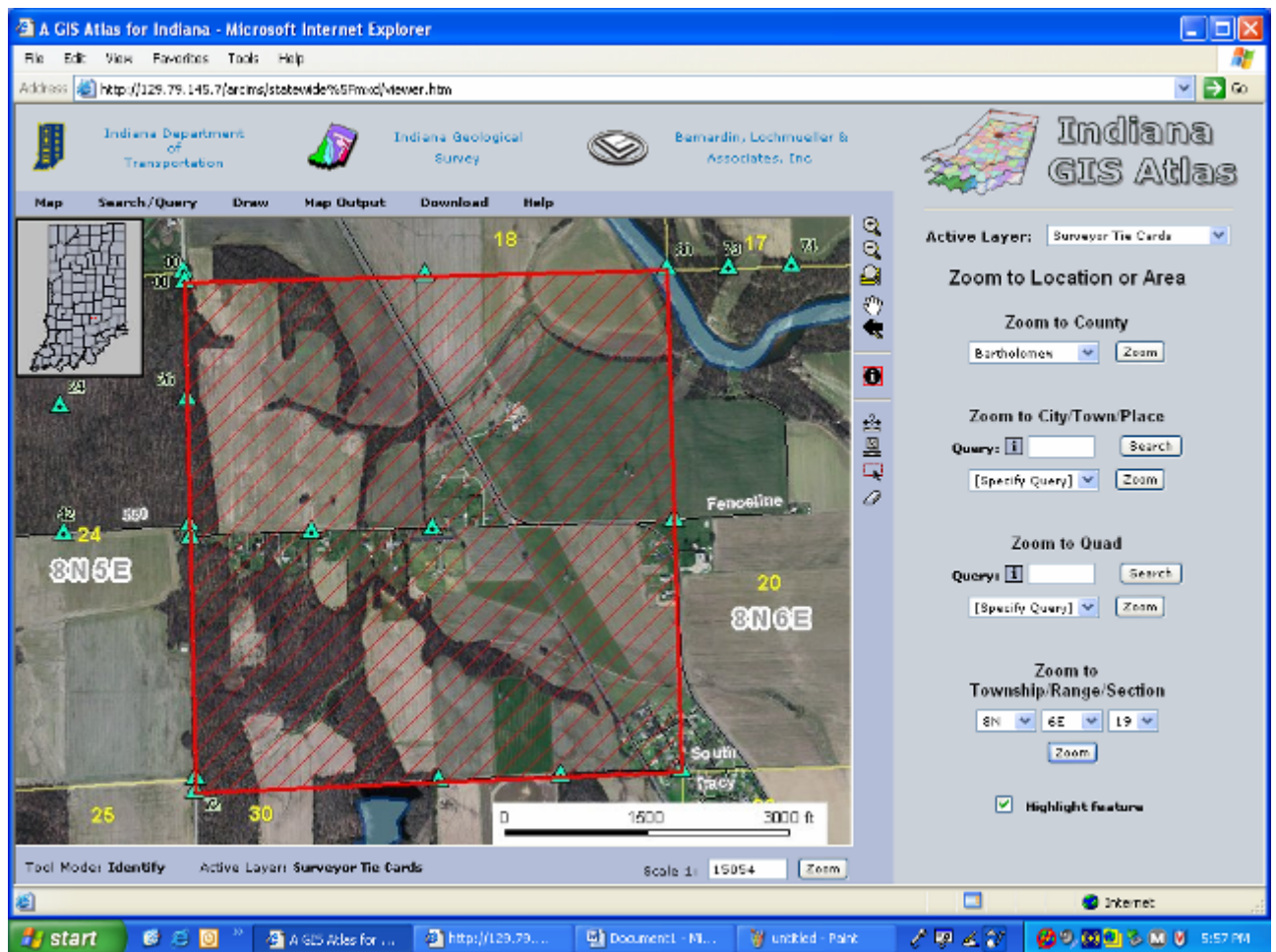
The yellow numbers are the section number.   The section numbers only show up when you are zoomed into a scale of 1:60,000 or less.
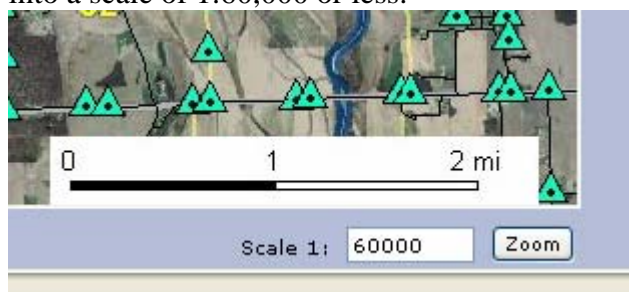
The black numbers with a white halo represent the "Grid Point" number.

The green triangles with a black dot inside are the locations (Grid Points) that you can click on with the identify button.
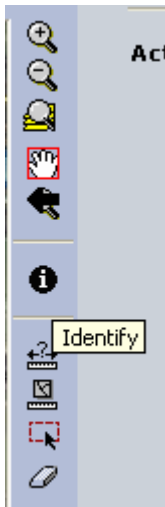
Click on the "Identify" button

The pointer turns into a crosshair when you move it to the map.

Then go to the map and click on a green triangle.

Click on a green triangle (choose Grid point 40 in the center of the section)
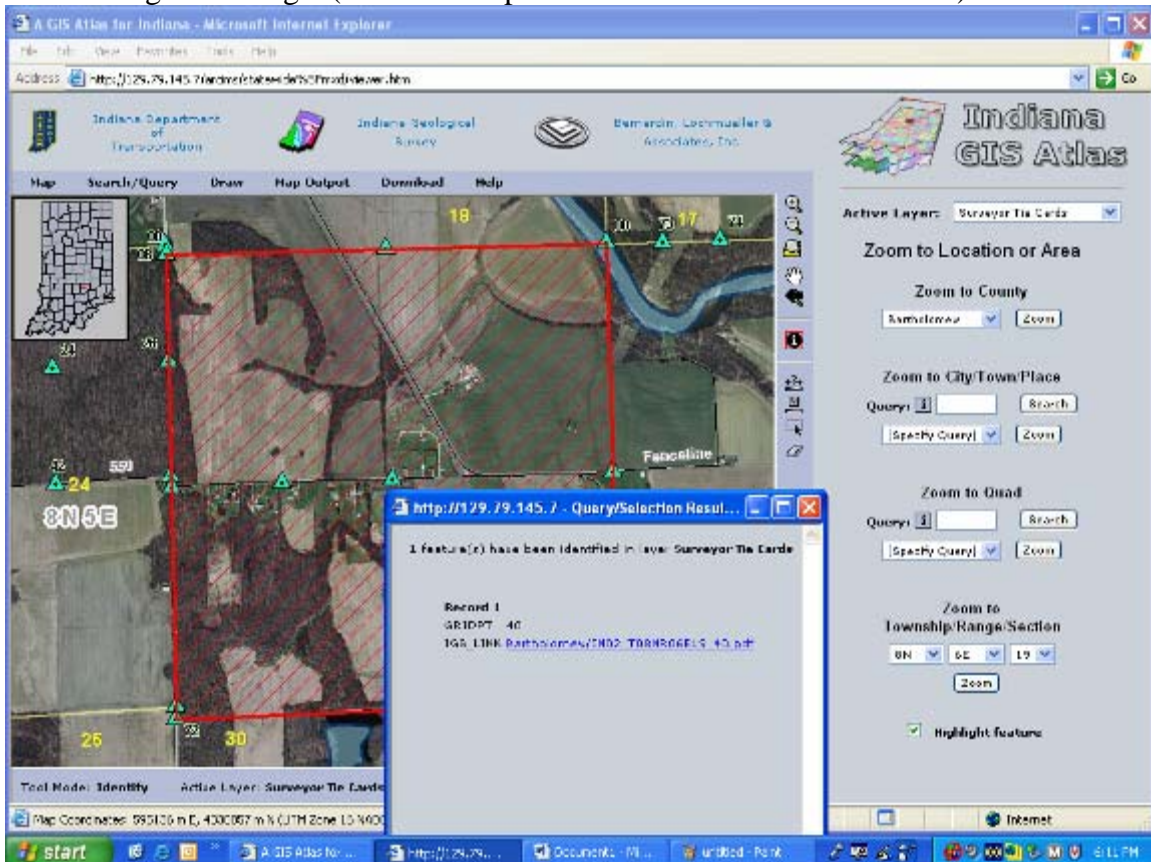
A new window opens and you see the IGS Link and the Name of the point. The point name in blue is a hyperlink.
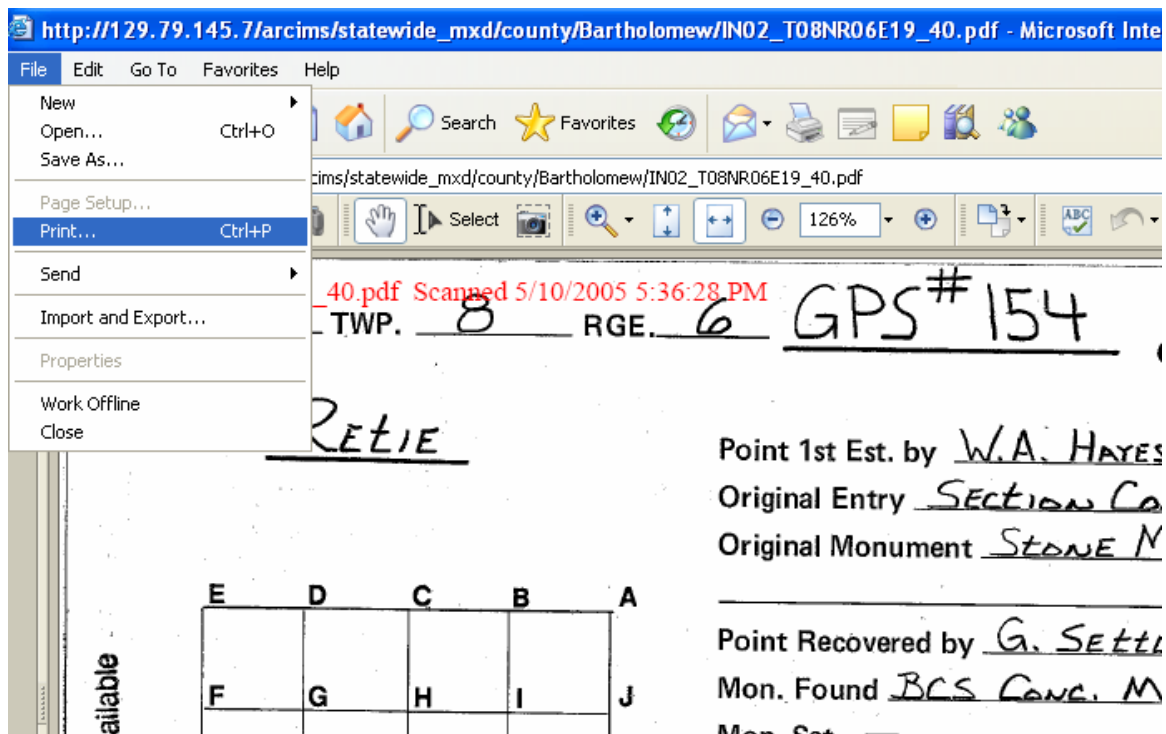
Click on the blue hyperlinked name and the Tie Card will open. You can enlarge the window.
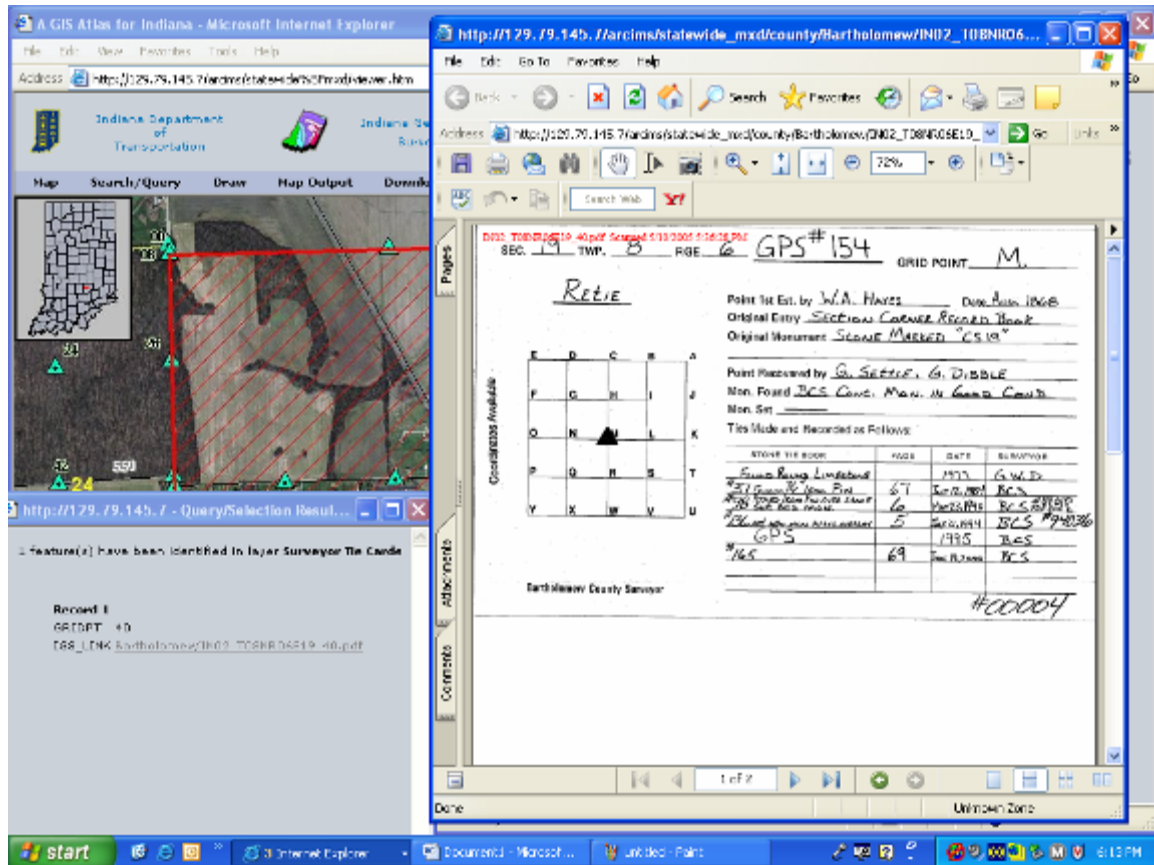
If you can't see the IGS Link _Bartholomew_____ you probably do not have the "Active Layer" set to "Surveyor Tie Cards".

The Tie Card can be printed by clicking on "File" in the Tie Card Window.

Click or hover over File, then select Print.

Some points may have many Tie Cards associated with the same point. When clicking on a point, all Tie Cards name hyperlinks will appear. Click on the ones of interest.

You can also use the "Select by Rectangle" tool to select several points at a time.


Click on the "Select by Rectangle" tool.

Draw a box around the points of interest.

The points will change color and a window will pop up with the hyperlinks. Click on the hyperlink to see the Tie Cards (one at a time) and you can print them off if you want.

I selected points in T8NR25Esection 24.

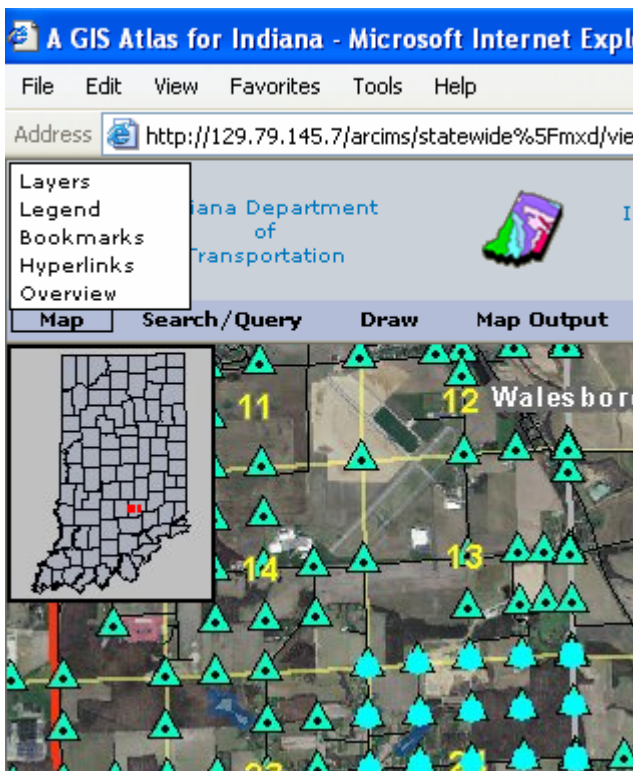A new window opens and shows there are 22 features associated with the points I selected.

Open the hyperlink to see the Tie Card.
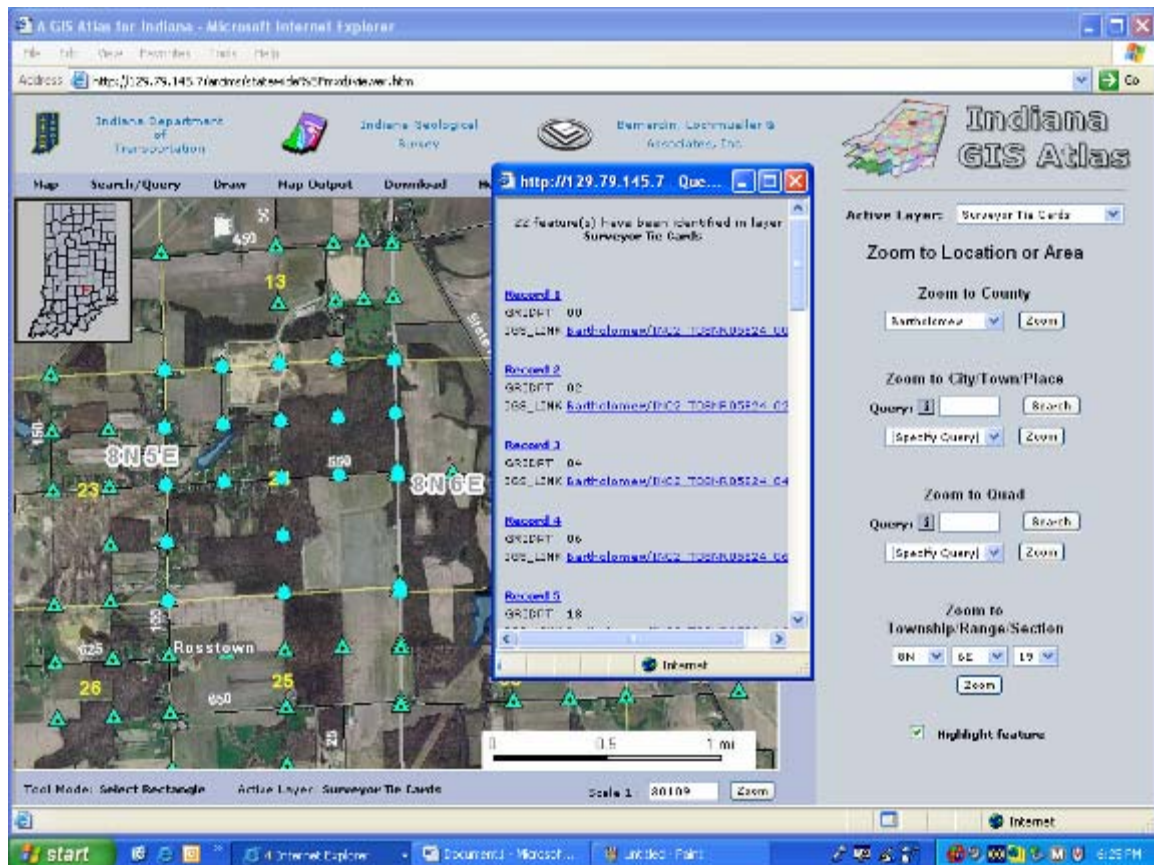
To clear the selection, click on the tool that looks like an eraser. It doesn't erase anything, it clears the points you selected so you can move to different points.

To return the original view of the state, go to the "Map" at the top right.

Hoover over the "Map" and select "Layers". This changes the information on the right so that you can see all the layers on the right hand side of the screen

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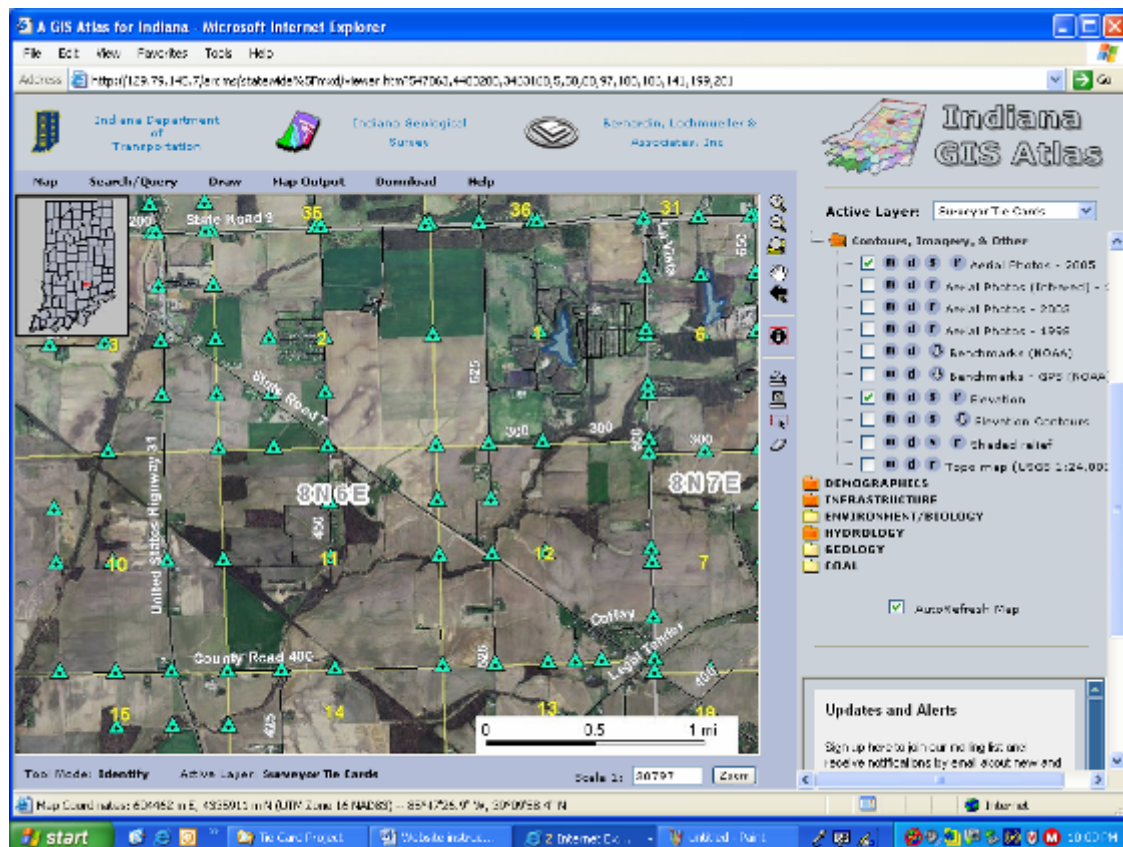
The website has many different layers of interest.

This document only discusses the layers and functions needed to view and retrieve copies of the Tie Cards at a minimum.

The website contains a number of data layers and functions that weren't discussed in this document.

Use the site and experiment. You can produce your own maps too.